DEMO

First chapter only

Free-Tier Infrastructure Mastery

Cloudflare + Supabase + Google Cloud at Zero Cost

pragma.vision

SOFT.HOUSE

Free-Tier Infrastructure Mastery

No Affiliation

This book is an independent publication. It is not authorized, sponsored, or endorsed by any of the companies or organizations whose products or services are mentioned herein.

No Professional Advice

The information in this book is provided for educational purposes only. It does not constitute legal, financial, investment, tax, or other professional advice. Readers should consult qualified professionals for guidance specific to their situation.

Code Examples

Code examples in this book are provided for illustration only. They may not be suitable for production use without additional validation, error handling, and security review.

Published by Pragma Vision LLC

First edition, 2026.

Contents

1

The Free-Tier Philosophy

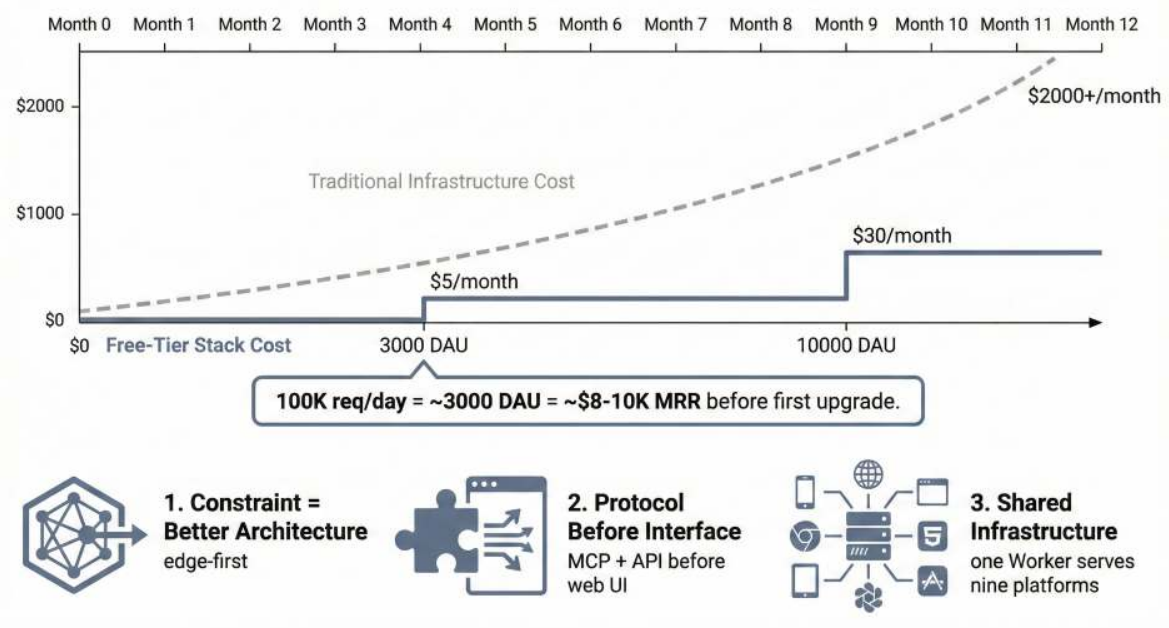

Figure 1. Traditional infrastructure cost climbs past $2,000/month by month 12 while a free-tier stack holds at $0 to 3,000 DAU, then $5 and $30/month — 100K req/day carries roughly 3,000 DAU and $8–10K MRR before the first upgrade

Every startup faces the same paradox: you need infrastructure to build a product, but you need a product to justify infrastructure spending. The traditional answer was $3,000–5,000 per month in cloud services before a single customer arrived. That era is over.

This book documents the **Pragma.Vision** infrastructure pattern—an AI-native commerce ecosystem architecture spanning a growing family of interconnected platforms—and how the early stack was designed to stay within free infrastructure tiers through eleven development sprints.

$0

infrastructure spend through 11 development sprints

That is not a typo. Not $0 per hour, not $0 for the first month. Zero dollars total, across edge computing, database hosting, object storage, authentication, and DNS. The architecture is built to handle real traffic, real cryptographic operations, and real payment-protocol negotiations within those free-tier limits.

1.1 What This Stack Supports

The free-tier stack in this book is not a toy demo. It is designed for a nine-platform ecosystem: **wish.now** (conversational commerce), **phantoid.com** (AI agent marketplace), **great.gift** (gift discovery), **soft.house** (developer portal and API platform), and **trustauthority.ai** (AI identity verification), among others. The architecture supports API traffic, cryptographic signature verification, and multi-step payment protocol flows while keeping early infrastructure spend near $0.

1.2 Why Free Tiers Are a Strategic Advantage

Free tiers are not charity. Cloud providers offer them to create lock-in, generate usage data, and convert a percentage of free users into paying customers. The provider *wants* you to succeed on their free tier because your success is their future revenue.

This creates a structural alignment: you get production-grade infrastructure at zero cost; they get a deeply integrated future customer. The key is architecting your system to stay within free-tier limits as long as possible—and upgrading only when revenue demands it, not because poor architectural choices forced your hand.

Key Insight

Free-tier architecture is not about being cheap. It is about extending your runway so that your first dollar of infrastructure spend is paid for by your tenth dollar of revenue. Build for zero cost, upgrade from profit.

1.3 The Three Pillars of Our Stack

This book covers three cloud providers, each chosen for a specific reason:

1. **Cloudflare** — Edge computing, key-value storage, SQL database, and object storage. The compute and data layer.
2. **Supabase** — PostgreSQL database with row-level security, authentication, and file storage. The relational data and auth layer.
3. **Google Cloud** — $300 startup credit for specialized services (AI APIs, BigQuery, Cloud Run). The overflow and experimentation layer.

Together, these three providers give you a production-grade stack that can handle thousands of daily active users without spending a cent. The rest of this book shows you exactly how.

1.4 What You Will Learn

Each chapter covers one component of the stack in depth, with exact limits, configuration examples, and architectural patterns. By the end, you will have:

- A complete mental model of what each free tier provides and where the boundaries are
- Working configuration files you can copy into your own projects
- Monitoring strategies to see utilization before you hit limits
- A decision framework for when and how to upgrade each component
- Architecture patterns that naturally stay within limits under real traffic

DEMO

This is a free preview of the full edition.

Get the complete book at:

https://shop.pragma.vision